DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017300
Date Inspected: 02-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: ZPMC: Mr. Liu Hua Jie, Mr. Li Yang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Ms. Chen Lin Li, stencil 053871 used shielded metal arc welding procedure WPS-B-P-2214-B-U2-FCM-1to make OBG weld OBE11B-001. This butt weld joins the side plates between OBG segments 11AE and 11BE on the cross beam side. This QA Inspector observed a welding current of approximately 155 amps, Ms. Chen Lin Li appeared to be certified to make this weld and the base material was preheated with electrical heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tang Yung, stencil 052493 used shielded metal arc welding procedure WPS-B-P-2214-B-U2-FCM-1to make OBG weld OBE11B-001. This butt weld joins the side plates between OBG segments 11AE and 11BE on the cross beam side. This QA Inspector observed a welding current of approximately 150 amps, Mr. Tang Yung appeared to be certified to make this weld and the base material was preheated with electrical heating elements. Items observed on this date appeared to generally comply with

applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Jian Wen, stencil 040378 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-1 to make OBG cross beam side plates to edge plate welds SEG064A-030 on segment 10CE and CA081-001 on segment 11AE. This QA Inspector observed a welding current of approximately 155 amps. This QA Inspector observed that Mr. Xu Jian Wen appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hua Linming, stencil 044515 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make OBG segment 10CE bikepath side longitudinal diaphragm weld SEG064C-031. This weld had been ultrasonically rejected and was being repaired per weld repair document B-WR15099. This QA Inspector observed a welding current of approximately 150 amps, Mr. Hua Linming appeared to be certified to make these welds, the welding electrodes were stored in a portable rod oven which was warm to the touch and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yun Qiang, stencil 044504 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make OBG segment 10CE cross beam side longitudinal diaphragm welds. These welds had been ultrasonically rejected and were being repaired per weld repair document B-WR15097. This QA Inspector observed a welding current of approximately 150 amps, Mr. Yun Qiang appeared to be certified to make these welds, the welding electrodes were stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure WPS-B-P-2214 to make hold back welds SP204-014-025 through -036. These side plate stiffener plate welds are on the inside of OBG cross beam 14. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed that Mr. Zhang Qiu Jun appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Changhong, stencil 040611 used shielded metal arc welding procedure WPS-B-P-2214 to make hold back welds CB202A-014-003. This weld is on the inside of OBG cross beam 14. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 156 amps. This QA Inspector observed that Mr. Xu Changhong appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

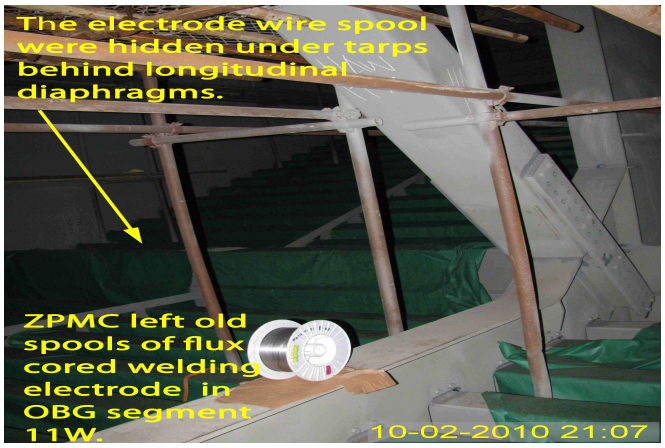
This QA Inspector observed ZPMC welder Mr. Sun Guang Ping, stencil 050289 used shielded metal arc welding procedure WPS-B-P-2214-TC-U4B-FCM-1 to make hold back welds CB202A-013-004. This weld is on the inside of OBG cross beam 13. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed that Mr. Sun Guang Ping appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 used shielded metal arc welding procedure WPS-B-P-2214-TC-U4B-FCM-1 to make hold back welds CB205-013-017. This weld is on the inside of OBG cross beam 13. This QA Inspector observed a welding current of approximately 175 amps. This QA Inspector observed that Mr. Huang Zhao appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Liu Tong Xia, stencil 040484 used shielded metal arc welding procedure WPS-B-P-2214-FCM-1 to make hold back welds FB203-013-009 through -016. These floor beam stiffener plate welds are on the inside of OBG cross beam 13. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed that Ms. Liu Tong Xia appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tang Yung, stencil 052493 used shielded metal arc welding procedure WPS-B-P-2214-FCM-1 to make hold back welds SP205-013-009 through -016. These side plate stiffener plate hold back welds are on the inside of OBG cross beam 13. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed that Mr. Tang Yung appeared to be certified to perform this welding and the electrodes were stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welders appeared to have hidden two spools of flux cored welding electrode wires and one rod oven containing ambient temperature E7018 shielded metal electrodes behind OBG segment 11BE longitudinal diaphragms near panel point PP98. ZPMC has written on the exterior of one of the FCAW spools that this electrode spool was initially used on 09-29-2010 and the second spool has a date of 10-01-2010 and a time of 0800 hours. This QA Inspector informed ZPMC CWI Mr. Liu Hua Jie who said he will have these welding electrodes removed from the OBG. See the photographs below for additional information.



Summary of Conversations:

See Above.

Comments

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer